STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

Implementation of Restructuring Legislation (Chapter 854, Statutes of 1996, AB 1890): Renewables	))))	Docket No. 96-REN-1890

Comments of the

Solar Thermal Electric Alliance

January 16, 1997

Renewables Program Committee Hearing

Steve Ponder
404 Mendocino Ave. #200
Santa Rosa, CA 95401
(707) 577-0840

Eric Wills
20668 Paseo de la Cumbre
Yorba Linda, CA 92687
(714) 693-2818

Tandy McMannes
28364 S. Western Avenue,
Suite 503
Rancho P.V., CA 90275
(310) 832-3681

Introduction

The Solar Thermal Electric Alliance ("STEA") has reviewed the January 3, 1997, draft of *Policy Report on AB 1890 Renewables Funding* ("Draft Report") prepared by the staff of the Energy Technology Development Division assigned to AB 1890. We understand that the report is a starting point for developing a proposal to the legislature and for receiving public comments in order to assist the Renewables Program Committee in the preparation of its recommendations to the full Commission. The STEA appreciates the opportunity to respond to the Draft Report.

The STEA has been active in the Renewables Working Group and these proceedings. Significant thought, as well as numerous discussions with other parties over a period of months, led to the STEA proposal.[1] We are concerned that the Draft Report essentially disregards the main points of our proposal and decreases our requested allocation of AB 1890 funds by 60%. The STEA believes that the most efficient use of funds for this technology would be through capital improvements, replacement of broken solar components (e.g. mirrors and heat collection tubes), and operations and maintenance ("O&M") cost reduction activities. These activities are long-term, infrastructure commitments that will make the facilities more competitive. We intend to focus our comments on the sections of the Draft Report that deal directly with requested STEA funding.

40% Allocation to Existing Facilities; Draft Report Contains Inequitable Reductions

Pursuant to Article 7, Section 383, subsection (b)(4) of AB 1890, "*Allocate moneys between (A) new and emerging and (B) existing renewable resources technology providers, provided that no less than 40 percent of the funds shall be allocated to either category.*" There is no "magic" to the 40-percent allocation amount other than that it is the minimum that can be provided to existing renewable resources. In reviewing the Draft Report, the Staff has effectively made 40% the maximum amount that they are willing to allocate to existing renewable resources. The Renewable Energy Industries' Consensus Proposal ("Industry Consensus") allocated 54% of AB 1890 funds to existing renewable resources and 46% to new and emerging.[2] The staff's reduction to existing renewable represents a $75.6 million, or 26%, reduction as shown below:

Resource Category	Consensus Proposal	Draft Report	Decrease % Amount	Decrease Percent	Decrease $(millions
Biomass	30%	26%	4%	13%	$ 21.6
Geothermal	5%	2%	3%	60%	$ 16.2
Wind	9%	8%	1%	11%	$ 5.4
Solar Thermal	10%	4%	6%	60%	$ 32.4
Total	54%	40%	14%	26%	$ 75.6

[1] Renewable Energy Industries Consensus Proposal, November 26, 1996, pages 11 - 16.
[2] Renewable Energy Industries Consensus Proposal, November 26, 1996, page 6.

Early in its hearings/workshops, the Commission strongly urged participants to reach a consensus. Existing suppliers representing 95% of California's renewable generation entered into negotiations and agreed to the allocation contained in the Consensus Proposal.

The STEA recommends that the CEC staff restore the 54% allocation ($75.6 million) to the existing suppliers. If the Commission is intent upon reducing the 54% allocation to existing facilities, which the STEA feels is inappropriate, the Commission should make the reduction proportional, based upon the Consensus Proposal.

Current SEGS Development

The nine (9) Solar Electric Generating Systems ("SEGS") produce over 90% of the *world's* large-scale solar thermal power. These plants were built in the 1984 - 1990 time frame and represent the most significant application of solar thermal technology in the world. These facilities have excellent load-following-generation characteristics, achieving 100% on-peak capacity factor, thereby producing power when the customer needs it most. The California Legislature has expressed paramount concern over the preservation and enhancement of electric system reliability during the transition period. [*See,* for example, Sections 330(g) and (h) of AB 1890.] Maintaining system reliability presents the greatest challenge during peak demand periods. Thus, it is essential for the state to retain its proven, reliable sources of peaking capacity during the transition.

Experience with similar deregulated markets such as natural gas has shown that prices for energy commodities become much more volatile once they are deregulated. The large hourly, daily, weekly, and seasonal variations in electric demand are likely to produce wide swings in electric prices. Although average electric prices may be quite low, they can be expected to rise very sharply during peak periods. In order to dampen such swings, it will be particularly important to maintain the state's access to adequate peaking capacity.

Future SEGS Development

The Draft Report states that "new parabolic trough construction in the foreseeable future is unlikely." If the Draft Report is referring to California development, then that is likely a reasonable statement given current depressed natural gas prices. However, if the Draft Report is referring to "any" new parabolic trough construction, then it is not a reasonable statement. At the present time, there are significant development activities in Mexico, Spain, Morocco, India, Greece, Egypt, Brazil, and elsewhere. Members of the STEA are actively involved in these developments. As discussed in these proceedings, there is a near-term need of over 3,500 MWs of bulk solar electric power.[3] Due to the fact that parabolic troughs have an excellent operating history, much of this new development will likely be parabolic trough.

[3] Report on "An Early Commercialization Strategy for Solar Thermal Electric Technologies," Solar Energy Industries Association, California Solar Energy Industries Association, Bechtel Corporation, Rockwell International, and Science Applications International Corporation, November 26, 1996, page 5.

To Exclude AB 1890 Funds from any existing SEGS Facility is not Appropriate

The Draft Report indicates that the Staff is considering excluding facilities with Standard Offer #2 contracts. The Draft Report also states:

> *"Staff question the benefit of continuing to support the early SEGS units which, even if modified and improved as proposed using these funds, still represent an older and less cost-effective technology...Staff are concerned about the equity of providing funds to the newest SEGS units, which requested 40% of the SEGS allocation and which were built with the variable and uncertain electricity prices of the Standard Offer #2 contracts. These generators made business decisions based upon low and uncertain gas prices, and these market conditions remain largely unchanged. The decision to support or exclude Standard Offer #2 contracts (of late vintage) from funding is still under consideration."*[4]

According to Article 7, Section 383(a)(3) of AB 1890, moneys are to be used to support *"the operations of existing, innovative solar thermal technologies that provide essential peak generation and related reliability benefits."* Nowhere in AB 1890 is there any discussion about eliminating support to the early SEGS units or those facilities under Standard Offer #2 contract. AB 1890 specifically requires that funding not be denied to any existing SEGS facility.

Not only will eliminating or reducing funding to the early SEGS units, or the Standard Offer #2 units, be in contradiction to the requirements of Article 7, Section 383(a)(3), but the following should also be considered:

1) The early SEGS units have been in operation for approximately 12 years, have survived the bankruptcy of the original developer and the entity responsible for providing performance guarantees, and have done so through creative management practices, debt restructuring and a very reasonable ownership body.

2) Just because you have the latest and greatest technology does not mean you will be successful. As any independent power producer knows, sound business management is just as important, if not more so, than having the latest technology. The early SEGS units have proven beyond a shadow of a doubt that they are deserving of AB 1890 funds. A facility with a "less cost effective technology" does not mean that it will be unable to compete.

3) Although SEGS I represents the earliest technology, it has the advantage of energy storage and, if necessary, is able to produce "solar power" at night. This may be an important aspect of competitive generation and is certainly a unique attribute of SEGS I.

[4] Draft Report, January 3, 1997, page 16.

4) The SEGS II facility is very similar in its design to SEGS III and IV.

5) In a competitive market, electricity generated by any SEGS facility does not have to be the least cost (even within the SEGS facilities) to be commercially successful. As stated by various participants in these proceeding, customers are willing to pay a premium for solar-generated electricity and it therefore does not have to compete directly with fossil-fuel generation or, for that matter, other renewable energy technologies. This understanding is supported by: (i) numerous surveys indicating that customers prefer renewable energy and that they prefer solar energy over all other forms of renewable energy; (ii) solar energy is preferred almost two-to-one over all other energy options (Roper Organization, 1987, 1993); and, (iii) one in five Americans is willing to pay a 30% premium for solar electricity (Cambridge Energy/Opinion Dynamics, 1995). To make a judgment today is not appropriate due to the fact that no one knows the true dynamics of the competitive market.

6) It is our understanding that numerous Standard Offer contracts were set during this period. To single out Standard Offer #2 contracts for elimination from funding is not appropriate.

7) On a going-forward basis, and considering the ability of all technologies to compete, we also have a difficult time understanding the difference between a Standard Offer #4 contract after the completion of its fixed-energy-price period and a Standard Offer #2 contract.

8) One of the stated purposes of AB 1890 is to maintain diversity of the renewables industry and any inequitable elimination from AB 1890 funding of a renewable based solely on Standard Offer #2 contracts *"of late vintage"* does the opposite.

One Size Does Not Fit All

As stated, the STEA believes that the most efficient use of funds for this technology will be through capital improvements, replacement of broken solar components (e.g. mirrors and heat collection tubes), and operations and maintenance ("O&M") cost reduction activities. These activities are long-term, infrastructure commitments that will make the facilities more competitive. This commitment is needed so that the SEGS facilities can work together and take the appropriate steps to secure replacement parts and implement capital improvements activities. Our proposal also allocated the funds to the separate sites as follows: 20% Daggett (SEGS I and II), 40% Kramer Junction (SEGS III - VII), and 40% Harper Lake (SEGS VIII - IX). This allocation agreement among the SEGS sites is based upon plant size, generation, deferred maintenance, and general need issues.

In reviewing our November 26, 1996, proposal, the STEA realized that it unintentionally excluded a production requirement in order to receive the funds. Therefore, our November 26, 1996, proposal[5] is hereby modified as follows (changes in italics):

The private sector will decide how to distribute the funds to the individual SEGS facilities with the general guidelines that: (1) a project must not be in the fixed-energy-payment period of an existing contract; (2) the funds must be used for capital improvements, replacement of broken solar components (e.g. mirrors and heat collection tubes), and operations and maintenance ("O&M") cost reduction activities; *(3) the facility must be in operation at the time of payment; and, (4) the last four-quarter energy production rolling average must be at least 75% or greater than the previous four-quarter energy production rolling average. Each SEGS facility would submit a quarterly certification of its production.*[6] If required, the SEGS facilities would be willing to provide the CEC or its designee with proof of the actual purchases and expenses. *We have also eliminated any reference to a use of funds for debt restructuring activities from our November 26, 1996, Renewable Energy Industries' Consensus Proposal.*

This issue was discussed among the SEGS industry and was part of the agreed-upon 40%/40%/20% split among the sites. The SEGS facilities want to work together in the procurement of solar field components and capital investment. The STEA is unique among all the renewable technologies in that we have an agreement as to how the funds should be allocated to each particular site.

The Draft Report states, *"It is Staff's intention to develop a plan that is simple and inexpensive to administer; however, Staff recognize that the distribution mechanisms for the renewable funds should not be oversimplified to the extent that they would not be helpful to those industries supported by any particular allocation account."*[7] Due to the fact that (i) we are dealing with a limited number of projects (i.e. SEGS I-IX); (ii) we can easily provide a quarterly certification stating that we have met the guidelines stated above; and, (iii) the existing funds have been allocated by technology type (i.e. no other technology could compete for existing SEGS facility funds), our proposal would be "simple and inexpensive to administer."

The production credit proposal has no limitation on what the money could be used for. The SEGS proposal would provide invoices and implement a plan for spending the money on capital and long-term improvements (i.e. the Commission would be assured that the money would not be wasted or be utilized for unintended purposes). Our proposal effectively guarantees that the SEGS will be investing in capital and long-term payback items with the end result that the SEGS facilities will be in a much healthier position after the 4-year transition period.

---

[5] Renewable Energy Industries Consensus Proposal, November 26, 1996, pages 14 - 15.
[6] The quarterly certification report proposed in the Draft Report on page ES-7 could be used for this purpose.
[7] Staff Draft Policy Report on AB 1890 Renewable Funding, January 3, 1997, page ES-6.

The STEA is committed to the long-term health of California's existing solar thermal projects and to the development of future solar thermal projects. We appreciate the opportunity to work with the CEC to accomplish that goal.